SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.
   1. Door hardware for steel (hollow metal) doors.
   2. Door hardware for wood doors.
   3. Door hardware for other doors indicated.
   4. Keyed cylinders as indicated.

B. Related Sections:
   1. Division 6: Rough Carpentry.
   2. Division 8: ICU Entrances
   3. Division 8: Hollow Metal Doors and Frames.
   4. Division 8: Wood Doors.
   5. Division 26 Electrical
   6. Division 28: Electronic Security

C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.
   1. Builders Hardware Manufacturing Association (BHMA)
   2. NFPA 101 Life Safety Code
   3. NFPA 80 -Fire Doors and Windows
   4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
   5. UL10C – Positive Pressure Fire Test of Door Assemblies
   6. ANSI-A117.1 – Accessible and Usable Buildings and Facilities
   7. DHI /ANSI A115.IG – Installation Guide for Doors and Hardware

D. Intent of Hardware Groups
   1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
   2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to Architect, prior to date specified for receipt of bids for clarification by addendum;

or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

1.2 SUBSTITUTIONS

A. Comply with Division 1.

1.3 SUBMITTALS

A. Comply with Division 1.

B. Special Submittal Requirements: Coordinate submittals of this Section with related Sections to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

C. Product Data: Manufacturer's specifications and technical data including the following:

1. Detailed specification of construction and fabrication.
2. Manufacturer's installation instructions.
3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
4. Submit 6 copies of catalog cuts with hardware schedule.

D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.

1. List groups and suffixes in proper sequence.
2. Completely describe door and list architectural door number.
3. Manufacturer, product name, and catalog number.
4. Function, type, and style.
5. Size and finish of each item.
6. Mounting heights.
7. Explanation of abbreviations and symbols used within schedule.
8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.

F. Samples: (If requested by the Architect)
   1. 1 sample of Lever and Rose/Escutcheon design, (pair).
   2. 3 samples of metal finishes

G. Contract Closeout Submittals: Comply with Division 1 including specific requirements indicated.
   1. Operating and maintenance manuals: Submit 3 sets containing the following.
      a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
      b. Catalog pages for each product.
      c. Name, address, and phone number of local representative for each manufacturer.
      d. Parts list for each product.
   2. Copy of final hardware schedule, edited to reflect, "As installed".
   3. Copy of final keying schedule
   4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both low voltage and 110 volts.
   5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

1.4 QUALITY ASSURANCE

A. Comply with Division 1.
   1. Statement of qualification for distributor and installers.
   2. Statement of compliance with regulatory requirements and single source responsibility.
   3. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.
      a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
      b. Hardware Schedule shall be prepared and signed by an AHC.
   4. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.

5. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.
   a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
   b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.
6. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.

B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Comply with Division 1.
   1. Deliver products in original unopened packaging with legible manufacturer's identification.
   2. Package hardware to prevent damage during transit and storage.
   3. Mark hardware to correspond with "reviewed hardware schedule".
   4. Deliver hardware to door and frame manufacturer upon request.

B. Storage and Protection: Comply with manufacturer's recommendations.

1.6 PROJECT CONDITIONS

A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.

B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.7 WARRANTY

A. Refer to Conditions of the Contract

B. Manufacturer's Warranty:

1. Closers: Ten years
2. Exit Devices: Three Years
3. Locksets & Cylinders: Three years
4. All other Hardware: Two years

1.8 OWNER'S INSTRUCTION

A. Instruct Owner's personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE

A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.
   1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
   2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
   3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.

B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Hinges: Shall be Five Knuckle Ball bearing hinges
   1. Template screw hole locations
   2. Bearings are to be fully hardened.
   3. Bearing shell is to be consistent shape with barrel.
   4. Minimum of 2 permanently lubricated non-detachable bearings on standard weight hinge and 4 permanently lubricated bearing on heavy weight hinges.
   5. Equip with easily seated, non-rising pins.
   6. Non Removable Pin screws shall be slotted stainless steel screws.
   7. Hinges shall be full polished, front, back and barrel.
   8. Hinge pin is to be fully plated.

9. Bearing assembly is to be installed after plating.
10. Sufficient size to allow 180-degree swing of door
11. Furnish five knuckles with flush ball bearings
12. Provide hinge type as listed in schedule.
13. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
14. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
15. UL10C listed for Fire

B. Mortise Type Locks and Latches:

1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra-Heavy Duty, Security Grade 2 and be UL10C
2. Fit ANSI A115.1 door preparation
3. Functions and design as indicated in the hardware groups
4. Solid, one-piece, 3/4-inch (19mm) throw, anti-friction latchbolt made of self-lubricating stainless steel
5. Deadbolt functions shall have 1 inch (25mm) throw bolt made of hardened stainless steel
6. Latchbolt and Deadbolt are to extend into the case a minimum of 3/8 inch (9.5mm) when fully extended
7. Auxiliary deadlatch to be made of one piece stainless steel, permanently lubricated
8. Provide sufficient curved strike lip to protect door trim
9. Lever handles must be of forged or cast brass, bronze or stainless steel construction and conform to ANSI A117.1. Levers that contain a hollow cavity are not acceptable
10. Lock shall have self-aligning, thru-bolted trim
11. Levers to operate a roller bearing spindle hub mechanism
12. Mortise cylinders of lock shall have a concealed internal setscrew for securing the cylinder to the lockset. The internal setscrew will be accessible only by removing the core, with the control key, from the cylinder body.
13. Spindle to be designed to prevent forced entry from attacking of lever
14. Provide locksets with 7-pin removable and interchangeable core cylinders

15. Each lever to have independent spring mechanism controlling it
16. Core face must be the same finish as the lockset

C. Cylindrical Type Locks and Latchsets:
1. Tested and approved by BHMA for ANSI A156.2, Series 4000, Operational Grade 1, Extra-Heavy Duty, and be UL10C listed
2. Fit modified ANSI A115.2 door preparation
3. Locksets and cores to be of the same manufacturer to maintain complete lockset warranty
4. Locksets to have anti-rotational studs that are thru-bolted
5. Keyed lever shall not have exposed "keeper" hole
6. Each lever to have independent spring mechanism controlling it
7. 2-3/4 inch (70 mm) backset
8. 9/16 inch (14 mm) throw latchbolt
9. Provide sufficient curved strike lip to protect door trim
10. Outside lever sleeve to be seamless, of one-piece construction made of a hardened steel alloy
11. Keyed lever to be removable only after core is removed, by authorized control key
12. Provide locksets with small format 7-pin removable and interchangeable core cylinders
13. Hub, side plate, shrouded rose locking pin to be a one-piece casting with a shrouded locking lug.
14. Locksets outside locked lever must withstand a minimum 1400 inch pounds of torque. In excess of that, a replaceable part will shear. Key from outside and inside lever will still operate lockset
15. Core face must be the same finish as the lockset
16. Functions and design as indicated in the hardware groups

D. Exit Devices shall:
1. Tested and approved by BHMA for ANSI 156.3, Grade 1
2. Provide a deadlocking latchbolt
3. Non-fire rated exit devices shall have cylinder dogging.
4. Touchpad shall be "T" style
5. Exposed components shall be of architectural metals and finishes.
6. Lever design shall match lockset lever design
7. Provide strikes as required by application.
8. Fire exit devices to be listed for UL10C

9. UL listed for Accident Hazard
10. Shall consist of a cross bar or push pad, the actuating portion of which extends across, shall not be less than one half the width of the door leaf.
11. Provide vandal resistant or breakaway trim
12. Aluminum vertical rod assemblies are acceptable only when provide with the manufacturers optional top and bottom stainless steel rod guard protectors

E. Cylinders:
1. Provide the necessary cylinder housings, collars, rings & springs as recommended by the manufacturer for proper installation.
2. Provide the proper cylinder cams or tail piece as required to operate all locksets and other keyed hardware items listed in the hardware sets.
3. Coordinate and provide as required for related sections.

F. Door Closers shall:
1. Tested and approved by BHMA for ANSI 156.4, Grade 1
2. UL10C certified
3. Closer shall have extra-duty arms and knuckles
4. Conform to ANSI 117.1
5. Maximum 2 7/16 inch case projection with non-ferrous cover
6. Separate adjusting valves for closing and latching speed, and backcheck
7. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
8. Full rack and pinion type closer with 1½" minimum bore
9. Mount closers on non-public side of door, unless otherwise noted in specification
10. Closers shall be non-handed, non-sized and multi-sized.

G. Automatic Operators shall:
1. Furnished in Section 08 71 13.

H. Door Stops: Provide a dome floor or wall stop for every opening as listed in the hardware sets.
1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.
2. Provide fastener suitable for wall construction.
3. Coordinate reinforcement of walls where wall stop is specified.

4. Provide dome stops where wall stops are not practical. Provide spacers or carpet riser for floor conditions encountered

I. Over Head Stops: Provide a Surface mounted or concealed overhead when a floor or wall stop cannot be used or when listed in the hardware set.
   1. Concealed overhead stops shall be heavy duty bronze or stainless steel.
   2. Surface overhead stops shall be heavy duty bronze or stainless steel.

J. Push Plates: Provide with four beveled edges ANSI J301, .050 thickness, size as indicated in hardware set. Furnish oval-head countersunk screws to match finish.

K. Pulls with plates: Provide with four beveled edges ANSI J301, .050 thickness Plate s with ANSI J401 Pull as listed in hardware set. Provide proper fasteners for door construction.

L. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.

M. Mop plates: Provide with four beveled edges ANSI J103, 4 inches high by width less 1 inch on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.

N. Armor Plates: Provide ANSI J101 with four beveled edges, 34 inches high by width less 1 inch on single or pairs of doors. Furnish oval-head countersunk screws to match finish.
   1. Provide cutouts for hardware as listed in the hardware sets.
   2. Provide Warnock Hersey labeled plates for 3 hour metal fire doors where allowed by local authority.

O. Door Bolts: Flush bolts for wood or metal doors.
   1. Provide a set of Automatic bolts ANSI/BHMA 156.3 Type 25 for hollow metal label doors.
   2. Provide a set of Automatic bolts ANSI/BHMA 156.3 Type 27 at wood label doors.
   3. Manual flush bolts ANSI/BHMA 156.16 at openings where allowed local authority.
   4. Provide Dust Proof Strike ANSI/BHMA 156.16 at doors with flush bolts without thresholds.

P. Coordinator and Brackets: Provide a surface mounted coordinator when automatic bolts are used in the hardware set.
   1. Coordinator shall comply with ANSI/BHMA A1156.3 Type 21A full width of the opening.
   2. Provide mounting brackets for soffit applied hardware.
   3. Provide hardware preparation (cutouts) for latches as necessary.

Q. Power Supply: Provide power supply for (ELR) Electric Latch Retraction exit devices
   1. Motherboard will accept up to four plug-in Control Modules. Provide the appropriate necessary control module to operate the number of ELR exit devices used at each opening. The Control Module shall include a Time delay Feature, variable (0-4 minutes) latch retraction period in response to a momentary input.
   2. UL Listed for class II output
   3. Include circuit breakers for protection of motherboard
   4. 115 or 230 Volt user selectable switch, with AC input= 115 Volt at 1 Amp
   5. Control module shall include Fire alarm terminal and Auxiliary contacts for remote signaling.
   6. Optional card for Battery Backup (BT) power tap module to operate a Card reader or when ELR devices require battery backup (Lead Acid Batteries are not included and is to be furnished by others)
   7. Precision ELR150 Series with the required modules.

R. Electromagnetic Locks: BHMA A156.23; electrically powered, of strength and configuration indicated; with electromagnet attached to frame and armature plate attached to door
   1. Type: Full exterior or full interior, as required by application indicated.
   2. Strength Ranking: 1500 lbf.
   3. Inductive Kickback Peak Voltage: Not more than 0 V.
   4. Residual Magnetism: Not more than 0 lbf to separate door from magnet.

S. Exit Check Integrated Delayed Egress Lock:: BHMA A156.23 and NFPA 101; electrically powered, of strength and configuration indicated; with electromagnet attached to frame and armature plate attached to door
   1. Type: Full exterior or full interior, as required by application indicated.

2. Strength Ranking: 1200 lbf
1. Inductive Kickback Peak Voltage: Not more than 0 V.
2. Residual Magnetism: Not more than 0 lbf to separate door from magnet.
3. Fixed 15 Second Delay. With time indicator

T. Power Supply: Field Selectable 12VDC or 24VDC output. The power supply will specifically designed to support electric locks and access controls. The power supply uses 115 VAC at 800mA input. The power shall be able to be expanded to four station controls. The filtered and regulated output power is field selectable for 12 or 24 VDC.
1. Fire Alarm/Life Safety emergency release included in power supply.
2. Available options for multiple door options four or more control stations, Adjustable Time delay relay, Battery charging, Battery Back up.

U. Power Transfer: Power transfer device shall be a steel housing and flexible tube. Secure and inconspicuous channel is to bring power from the frame to the door.
1. ABH PT1000
2. Tube shall accept up to 5/16" wire bundle and accommodate a door swing of up to180 Degrees based on door and frame conditions. "UL Listed" as Miscellaneous Fire Door Accessory. Coordinate position in door and frame with other hardware applications.
3. Wires as required by others

V. Electric Door Strike: ANSI/BHMA 156.31, Grade 1. and listed for Burglary Protection ANSI/ UL1034 Grade 1.
1. For General use provide fail-secure electric strike and with fire-rated device.
2. Listed UL10C-1997 Fire Door assemblies
3. Latchbolt monitor switch option when specified in hardware sets.
4. Provide the electric strike in the appropriate model that will accept a 5/8" or 3/4" latchbolt.

W. Door Position Switch: Provide door position switch for door status monitoring as indicated in hardware sets.
1. At all fired rated doors the door and frame hardware preparation will be provided by the door and frame manufacturer or by an authorized label service agent.

X. Magnetic Door Holders: Provide magnetic door holders with Tri-Voltage that can be wired 12VDC, 24V AC/DC or 120V AC
   1. Wall magnetic door holders shall be [Recessed, Surface or Flush mounted].
   2. Armature shall be thru-bolted and can be provided with any projection required.
   3. Models will be available in US28, sprayed finishes and 630.
   4 Floor mounted shall be provided for a single door or double door hold open application.

Y. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.

Z. Weatherstripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel arm mounted closers install weatherstrip first.
   1. Weatherstrip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon Brush, Silicone)
   2. UL10C Positive Pressure rated seal set when required.

AA. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the hardware sets.
   1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)
   2. UL10C Positive Pressure rated seal set when required.

BB. Thresholds: Thresholds shall be aluminum beveled type with maximum height of ½" for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.

CC. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals occur.

2.2 FINISH

A. Designations used in Schedule of Finish Hardware - 3.5, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products. Products shall be Antimicrobial Coating as specified

B. Powder coat door closers to match other hardware, unless otherwise noted.

C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

2.3 KEYS AND KEYING

A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.

B. Cylinders, removable and interchangeable core system: Best Coremax Patented 7-pin.

C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."

D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested.

E. Furnish keys in the following quantities:

1. 2 each Grand Masterkeys
2. 2 each Control keys
3. 6 each Masterkeys
4. 3 each Change keys each keyed core
5. 15 each Construction masterkeys
6. 2 each Construction Control keys

F. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.

G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.

1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS

A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.

1. Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).
2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION

A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

B. Conform to local governing agency security ordinance.

C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.

1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.

D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

E. Per Section 01 00 00 "General Requirements" 1.4.D.2; GC shall turn over all permanent lock cylinders to the VA locksmith for permanent installation.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.

1. Check and adjust closers to ensure proper operation.
2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
   a. Verify levers are free from binding.
   b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.
3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE

Manufacturer List

(Provided for reference only, Equal products are acceptable.)

Code	Name (For Basis of Design, Only)
AB	ABH Manufacturing Inc.
BE	Best Access Systems
BY	By Others
FL	Falcon Lock
FA	Folger Adam Security Inc.
NA	National Guard
PE	Pemko
PR	Precision
SD	Security Door Controls, Inc.
ST	Stanley
TR	Trimco

Option List

Code	Description
DE	DELAYED EGRESS
FL	Fire Exit Hardware
TS	TOUCHBAR MONITORING SWITCH
B4E	BEVELED 4 EDGES
ELR	ELECTRIC LATCH RETRACTION
LBR	LESS BOTTOM ROD
RQE	REQUEST TO EXIT
G-MTG	"G" BTB MTG (SHOULDER BOLT)
1" EXTENSION	1" EXTENSION FOR WALL MAGNETS
CSK	COUNTER SINKING OF PLATES

Finish List

Code	Description
626	Satin Chromium Plated
628	Satin Aluminum, Clear Anodized
630	Satin Stainless Steel
689	Aluminum Painted
626AM	Satin Chrome – Antimicrobial Coating
630AM	Satin Stainless – Antimicrobial Coating
GRE	Grey

Hardware Groups

SET #1 – Stair CR

3 Hinges	FBB199 4 1/2 X 4 1/2 NRP	630	ST
1 Power Transfer	**PT1000**	**628**	**AB**
1 Power Supply	**602RF**		**SD**
1 Lockset	93K-7D15DS3 PATD	626AM	BE
1 Electro-mech Lock	**93KW-7DEU15DS3 PATD RQE**	**626AM**	**BE**
1 Door Closer	D-4550 **AVB** CS	689	ST
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Threshold	171 A		PE
1 Door Position Switch	**MC-4M**	**628**	**SD**
1 Weatherstrip	160 S x Head & Jambs		NA

1	Door Sweep	200 NA		NA

NOTE: When Authorized Card presented, electrically outside lever released allowing entry. Request-to-Exit built inside of lockset shunts access system authorizing exit.

SET #100 - Corridor UL

6	Hinges	FBB199 5 X 4 1/2	630	ST
2	Exit Device	FL 2201	630	PR
2	Door Closer	D-4550 EDA	689	ST
2	Armor Plate	KA050 34" x 1" LDW B4E CSK	630	TR
2	Magnetic Holder (12)	2100 1" EXTENSION	630	AB
1	Gasketing	5050 B x Head & Jambs		NA
1	Astragal	139 SS	630	NA

SET #101 - Corridor UL AO CR HO DE Remote

6	Hinges	FBB199 5 X 4 1/2	630	ST
2	Power Transfer	PT1000	628	AB
1	Power Supply	ELR152		PR
1	Power Supply	631RF UR-4A		SD
2	Electric Exit Device	ELR FL LS TS 2201 LBR	630	PR
1	Emlock (Magnetic Lock)		1511-DPS	628 SD
1	Exit Chek (Magnetic Lock)		1511S	628 SD
1	Station Control	101-AK		AB
1	Key Switch	701	630	SD
2	Mortise Cylinder	1E-74 PATD	626	BE
1	Card Reader	CARD READER		BY
2	Low Energy Operator	Magic Force x Actuators		ST
1	Push Button	452V	630	SD
2	Armor Plate	KA050 34" x 1" LDW B4E CSK	630	TR
2	Magnetic Holder	2100 1" EXTENSION	630	AB
2	Door Position Switch	MC-4M	628	SD
1	Gasketing	5050 B x Head & Jambs		NA
1	Astragal	139 SS	630	NA

NOTE: Actuator on non-patient side is inoperable unless approved card is presented. When approved card is presented the magnetic lock

releases allowing entrance and actuator button is active. When pushed electrically latch retracts and automatic operator opens the door. Patient side of door is locked by delayed egress magnetic lock and actuator is inoperable. When delayed egress is turned off by key at the station control, egress is allowed and actuator is active. If activated, electrically latches retract and the Automatic Operator opens the door. Key switch turns system off and magnetic hold opens holds the door open. Push button at desk releases locking systems and turns on actuator. When delayed egress is turned off at station control for exit or by push button, delayed egress automatically resets. System is connected to the fire alarm.

SET #102 - Corridor Alum UL AO CR HO Remote

8	Hinges	FBB199 5 X 4 1/2	630	ST
2	Power Transfer	PT1000	628	AB
1	Power Supply	ELR152		PR
1	Power Supply	602RF UR4A		SD
2	Electric Exit Device	ELR FL TS 2801 LBR	630	PR
1	Card Reader	CARD READER		BY
1	Emlock (Magnetic Lock)	1511-DPS	628	SD
1	Key Switch	701	630	SD
1	Mortise Cylinder	1E-74 PATD	626	BE
2	Low Energy Operator	Magic Force x Actuators		ST
2	Magnetic Holder	2100 1" EXTENSION	630	AB
1	Push Button	452V	630	SD
2	Door Position Switch	MC-4M	628	SD
1	Gasketing	5050 B x Head & Jambs		NA
1	Astragal	139 SS	630	NA

NOTE: Actuator on non-patient side is inoperable unless approved card is presented. When approved card is presented the magnetic lock releases allowing entrance and actuator button is active. When pushed electrically latch retracts and automatic operator opens the door. Patient side of door allows free egress and actuator is active. If activated, electrically latches retract and the Automatic Operator opens the door Key switch turns system off and magnetic hold opens holds the door open. Push button at desk releases locking systems and

turns on actuator. Key switch turns the system off and magnetic locks holds the doors open. System is connected to the fire alarm.

SET #103 - Corridor AO CR

6	Hinges	FBB199 5 X 4 1/2	630	ST
2	Power Transfer	PT1000	628	AB
1	Power Supply	ELR152		PR
1	Power Supply	602RF UR4A		SD
2	Electric Exit Device	ELR TS 2201 LBR	630	PR
1	Card Reader	CARD READER		BY
1	Emlock (Magnetic Lock)		1511-DPS	628 SD
2	Low Energy Operator	Magic Force x Actuators		ST
2	Wall Bumper	1270CV	626	TR
2	Door Position Switch	MC-4M	628	SD
1	Gasketing	5050 B x Head & Jambs		NA
1	Astragal	139 SS	630	NA

NOTE: Actuator on non-patient side is inoperable unless approved card is presented. When approved card is presented the magnetic lock releases allowing entrance and actuator button is active. When pushed electrically latch retracts and automatic operator opens the door. Patient side of door allows free egress and actuator is active. If activated, electrically latches retract and the Automatic Operator opens the door.

SET #104 - Stair UL CR | Alarm

3	Hinges	FBB199 4 1/2 X 4 1/2 NRP	630	ST
1	Power Transfer	PT1000	628	AB
1	Power Supply	602RF		SD
1	**Alarmed** Electric Exit Device	FL TS E2103 X V4908A **ALW x WH495**	630AM	PR
1	Card Reader	CARD READER		BY
1	Door Closer	D-4551 REG	689	ST
1	Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Door Position Switch	MC-4M	628	SD

1	Gasketing	5050 B x Head & Jambs		NA

NOTE: When Authorized Card presented, **shunts alarm and** electrically lever handle is released**, allowing entry, then relocks and re-activates alarm**. ~~Request-to-Exit built inside push pad of exit device~~ **Interior card reader** shunts ~~access system~~ **alarm** authorizing exit.

SET #105 - Stair-Mech. UL CR

3	Hinges	FBB199 5 X 4 1/2	630	ST
1	Power Transfer	PT1000	628	AB
1	Power Supply	602RF		SD
1	Elec. Exit Device	FL TS E2103 X V4908A	630AM	PR
1	Rim Cylinder	1E-72 PATD	626	BE
1	Door Closer	D-4550 EDA	689	ST
1	Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1	Card Reader	CARD READER		BY
1	Wall Bumper	1270CV	626	TR
1	Door Position Switch	MC-4M	628	SD
1	Gasketing	5050 B x Head & Jambs		NA

NOTE: When Authorized Card presented, electrically outside lever released allowing entry. Request-to-Exit built inside of exit device shunts access system authorizing

SET #106 - Elev. Lobby-Mech. CR

6	Hinges	FBB199 4 1/2 X 4 1/2	626	ST
1	Power Transfer	PT1000	628	AB
1	Power Supply	602RF		SD
1	Set Auto Flush Bolts	3825L X 3815L	626	TR
1	Dustproof Strike	3910	630	TR
1	Electro-mech Lock	93KW-7DEU15DS3 PATD RQE	626AM	BE
2	Door Closer	D-4550 CS	689	ST
1	Coordinator	3094B x Mounting Brackets	BLK	TR
2	Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
2	Door Position Switch	MC-4M	628	SD
1	Gasketing	5050 B x Head & Jambs		NA
1	Astragal	158 SA		NA

NOTE: When Authorized Card presented, electrically outside lever released allowing entry. Request-to-Exit built inside of lockset shunts access system authorizing exit.

SET #107 - Elev. Lobby CR

6	Hinges	FBB199 4 1/2 X 4 1/2	626	ST
2	Power Transfer	PT1000	628	AB
1	Power Supply	602RF		SD
1	Auto Flush Bolt Top Only	3815L	626	TR
~~1~~	~~Lockset~~	~~93K-7D15DS3 PATD~~	~~626AM~~	~~BE~~
1	**Electro-mech Lock (FS)**	**93KW-7DEL15DS3 PATD RQE**	**626AM**	**BE**
1	Electric Strike	732-75	630	FA
2	Low Energy Operator	Magic Force x Actuators		ST
1	Coordinator	3094B x Mounting Brackets	BLK	TR
1	Card Reader	CARD READER		BY
2	Wall Bumper	1270CV	626	TR
2	Kick Plate	KO050 10" X 1"LDW B4E C-SUNK	630	TR
2	Door Position Switch	MC-4M	628	SD
1	Gasketing	5050 B x Head & Jambs		NA
1	Astragal	158 SA		NA

NOTE: When authorized card is presented, electric strike releases and ~~corridor~~ **Lobby** actuator is active. If activated, the automatic operator opens the doors. **Corridor** ~~Lobby~~ side actuator is always active. If activated, the electric strike releases and the automatic operators opens the doors. **Lockset fail-safe (FS) to prevent lock-in on lobby side during fire alarm**

SET #108 - Lounge CR

3	Hinges	FBB199 4 1/2 X 4 1/2	626	ST
1	Power Transfer	PT1000	628	AB
1	Power Supply	602RF		SD
1	Electro-mech Lock	93KW-7DEU15DS3 PATD RQE	626AM	BE
1	Card Reader	Card Reader or Key Pad		BY
1	Door Closer	D-4551 REG	689	ST
1	Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Door Position Switch	MC-4M	628	SD

3 Door Silencers	1229A	GRE	TR

NOTE: When Authorized Card presented, electrically outside lever released allowing entry. Request-to-Exit built inside of lockset shunts accesss system authorizing exit.

SET #109 - Data CR

3 Hinges	FBB191 5 X 4 1/2	626	ST
1 Power Transfer	PT1000	628	AB
1 Power Supply	602RF		SD
1 Electro-mech Lock	93KW-7DEU15DS3 PATD RQE	626AM	BE
1 Card Reader	Card Reader or Key Pad		BY
1 Door Closer	D-4551 REG	689	ST
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Wall Bumper	1270CV	626	TR
1 Door Position Switch	MC-4M	628	SD
3 Door Silencers	1229A	GRE	TR

NOTE: When Authorized Card presented, electrically outside lever released allowing entry. Request-to-Exit built inside of lockset shunts accesss system authorizing exit.

SET #110 - Soiled UL CR

3 Hinges	FBB191 4 1/2 X 4 1/2	630	ST
1 Power Transfer	PT1000	628	AB
1 Power Supply	602RF		SD
1 Electro-mech Lock	93KW-7DEU15DS3 PATD RQE	626AM	BE
1 Keypad (1)	KEYPAD		BY
1 Door Closer	D-4551 REG	689	ST
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Wall Bumper	1270CV	626	TR
1 Door Position Switch	MC-4M	628	SD
1 Gasketing	5050 B x Head & Jambs		NA

NOTE: When Authorized Card presented, electrically outside lever released allowing entry. Request-to-Exit built inside of lockset shunts access system authorizing exit.

SET #111 - Consult

3 Hinges	FBB191 4 1/2 X 4 1/2	626	ST
~~1 Passage Set~~	~~93K-0N15DS3~~	~~626AM~~	~~BE~~
1 Keyed Privacy Lockset	**93K-7T15DS3 PATD**	**626AM**	**BE**
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #112 - Conference

3 Hinges	FBB191 4 1/2 X 4 1/2	626	ST
~~1 Lockset~~	~~93K-7R15DS3 PATD~~	~~626AM~~	~~BE~~
1 Passage Set	**93K-0N15DS3**	**626AM**	**BE**
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #113 - Office

3 Hinges	FBB191 4 1/2 X 4 1/2	626	ST
1 Lockset	93K-7B15DS3 PATD	626AM	BE
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #114 - Family Lounge

3 Hinges	FBB191 5 X 4 1/2	626	ST
1 Lockset	93K-7R15DS3 PATD	626AM	BE
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #115 - Storage

3 Hinges	FBB191 5 X 4 1/2	626	ST
1 Lockset	93K-7R15DS3 PATD	626AM	BE
1 Door Closer	D-4551 REG	689	ST
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #116 - Alum ICU

1	Mortise Cylinder	1E-74 PATD	626	BE

NOTE: Remaining hardware by door manufacturer.

SET #117 - Pat Toilet (Angle Door – Per Leaf)

1	Pivot Set	0370	630	AB
1	Roller Latch	1559BL	626	TR
2	Door Pull	**1109**-1 G-MTG	630	TR
~~1~~	~~Floor Stop~~	~~1211~~	~~626~~	~~TR~~
1	**Overhead Stop**	**4020 series**	**630**	**AB**

NOTE: Roller latch will stop and hold doors in closed position.

SET #118 - Toilet

3	Hinges	FBB191 4 1/2 X 4 1/2	626	ST
1	Privacy Set	93K-0L15DS3	626AM	BE
1	Door Closer	D-4550 EDA	689	ST
1	Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1	Mop Plate	KM050 4" x 1" LDW B4E CSK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Gasketing	5050 B x Head & Jambs		NA

SET #119 - Toilet

3	Hinges	FBB191 4 1/2 X 4 1/2	626	ST
1	Privacy Set	93K-0L15DS3	626AM	BE
1	Door Closer	D-4551 REG	689	ST
1	Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1	Mop Plate	KM050 4" x 1" LDW B4E CSK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Gasketing	5050 B x Head & Jambs		NA

SET #120 - Staff Toilet

3	Hinges	FBB191 4 1/2 X 4 1/2	626	ST
1	Deadlock	D271	626	FL
1	Lockset	93K-7D15DS3 PATD	626AM	BE

1 Door Closer	D-4551 REG	689	ST
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Mop Plate	KM050 4" x 1" LDW B4E CSK	630	TR
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5050 B x Head & Jambs	NA	

SET #121 - Ante Room

3 Hinges	FBB199 5 X 4 1/2	626	ST
1 Push/Pull Passage	66810	630	AB
1 Overhead Stop	1020 Series	630	AB
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Mop Plate	KM050 4" x 1" LDW B4E CSK	630	TR
3 Door Silencers	1229A	GRE	TR

SET #122 - Ante Room

3 Hinges	FBB191 4 1/2 X 4 1/2	626	ST
1 Push/Pull Passage	66810	630	AB
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Mop Plate	KM050 4" x 1" LDW B4E CSK	630	TR
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GRE	TR

SET #123 - HAC

3 Hinges	FBB191 5 X 4 1/2 NRP	626	ST
1 Lockset	93K-7D15DS3 PATD	626AM	BE
1 Door Closer	D-4550 EDA	689	ST
1 Floor Stop	1211	626	TR
3 Door Silencers	1229A	GRE	TR

SET #124 - Elev Stor.

3 Hinges	FBB191 4 1/2 X 4 1/2	630	ST
1 Lockset	93K-7D15DS3 PATD	626AM	BE
1 Door Closer	D-4551 REG	689	ST
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5050 B x Head & Jambs		NA

SET #125 - Shell

3 Hinges	FBB191 5 X 4 1/2	626	ST
1 Lockset	93K-7D15DS3 PATD	626AM	BE
1 Door Closer	D-4551 REG	689	ST
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5050 B x Head & Jambs		NA

SET #126 - Mech

3 Hinges	FBB191 4 1/2 X 4 1/2	626	ST
1 Lockset	93K-7D15DS3 PATD	626AM	BE
1 Door Closer	D-4550 EDA	689	ST
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5050 B x Head & Jambs		NA

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